

ABSTRACT**VIBRATING-BEAM ACCELEROMETER**

Accelerometer micromachined in a plane plate comprising a base, and at least one measurement cell including a moveable seismic mass $[(1)]$ connected to the base and capable of moving translationally along the sensitive y axis of the accelerometer under the effect of an acceleration γ along this y axis, a resonator cell that comprises a resonator $[(30)]$ that can vibrate and be subjected to a tensile or compressive force depending on the direction of the acceleration γ and is placed symmetrically with respect to an axis of symmetry S of the structure, this axis S being parallel to the y axis and passing through the center of gravity of the seismic mass $[(1)]$, the measurement cell furthermore including amplification means $[(2)]$ for amplifying the acceleration force, which means comprise at least one anchoring foot $[(7)]$ for anchoring to the base, two rigid terminations $[(4)]$ of the resonator cell and two pairs of micromachined arms $[(5, 6)]$ symmetrical with respect to the axis S, each pair comprising a first arm $[(5)]$ connecting a termination $[(4)]$ to the seismic mass $[(1)]$, and a second arm $[(6)]$ connecting the same termination $[(4)]$ to the anchoring foot $[(7)]$, the angle α between the Ox axis and the first arm being small enough for the tensile or compressive force exerted on the resonator $[(30)]$ to be greater than the acceleration force exerted on the seismic mass $[(1)]$.

~~Figure 1~~